NDIA-AIAA Interoperability and Systems Integration Conference

Joint Battle Management, Command & Control (JBMC2) Overview

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TEAMWORK - The KEY to US Military Capability

- One thing about the DOD-Industry Team…
  - Somebody is always ready to support your efforts with a pat on the back…

…And the best intentions may not produce desired resul

The Truth About Transformation

- Been happening – and is happening
  - Acceleration is the difference
- Doesn't happen with the flip of a switch
- More about minds than things & technology
- Coherent roadmap to the future is key to transforming the force
  - Must be orderly…
  - Yet accommodate disrupting advances…
- Must recognize for it, lead it, and sustain it

JBMC2 Responsibilities

- **Management Initiative Decision (MID 912)**
- **Expands USJFCOM responsibility for:**
  - Leading Combatant Commanders in development of joint doctrine, concepts, mission/capability requirements for Joint BMC2
  - Strengthening Department's fielding of Joint Battle Management Command & Control (JBMC2) capabilities
  - Coordinating JBMC2 capabilities for Joint integration & interoperability with the Joint Requirements Oversight Council (JROC)

MID912 Authorities vs C2 FCB

A set of responsibilities and authorities & capability & requirements mechanis

MID 912

SECDEF

Commander USJFCOM

JBMC2 BOD

JBMC2 Shortfall Prioritization; DOTMLPF Solutions (Service Lead Decisions; Programmatic issues etc); ACTD applicability and prioritization; JBMC2 Concepts; Experimentation; Integrated Architectures; JBMC2 Roadmaps; JBMC2 Prototyping; JCIDS Documents

JCIDS

JROC

JCB (COCOMS/SERVICES /AGENCIES)

C2 FCB Gap and Solution analysis

GATEKEEPER

Initial Capability Documents (ICD)
Capability Development Documents (C
Capability Production Documents (CPI

Joint Command and Control

People and Processes

Communication Capabilities

Enables

Joint

Planning
Deciding
Coordinating
Directing
Assessing

ALL are too slow and inefficient

Service elements today can deploy, employ, create effects quicker than Joint Force Commander can "command and control" them!

Joint Command and Control Issues

- **The need for JTF Readiness**
  - **Combat Units Train the Way They will Fight**
    - ***They are ready***
  - **JTF HQ's rarely train the Way They Will Fight**
  - **Service HQ's challenged to sustain readiness**

- **Shortfalls in decision-making, execution and assessment throughout the battlespace**

- **Technology is available now to enable more rapid, effective planning, decision-making and execution**
  - **Collaborative environment drives both C2 processes and organizational changes**
  - **Net-centric OPS require a new level of**

Problem Set

- Failure to view C2 as an integrated weapon sys

- **Interoperability shortfalls hamper C2 and Joint Fires**
- **Lack of standard operating procedures (SOPs)**
- **Lack of standard tactics, techniques, & procedures (TTPs)**
- **Ad Hoc JTF activation and augmentation**
- **No standards for JTF leadership or C2 personnel**
- **No standard deployable JTF C2 facilities**
- **Situation awareness shortfall across battlespace**
- **Missing decision support & info management tools**

Requires improvements in Joint Battle Management Command and Control (JBMC2) – (What *IS* That…?)

(From: JTF C2 Operational Concept Study)

Joint Battle Management Command and Control (JBMC2) Definition

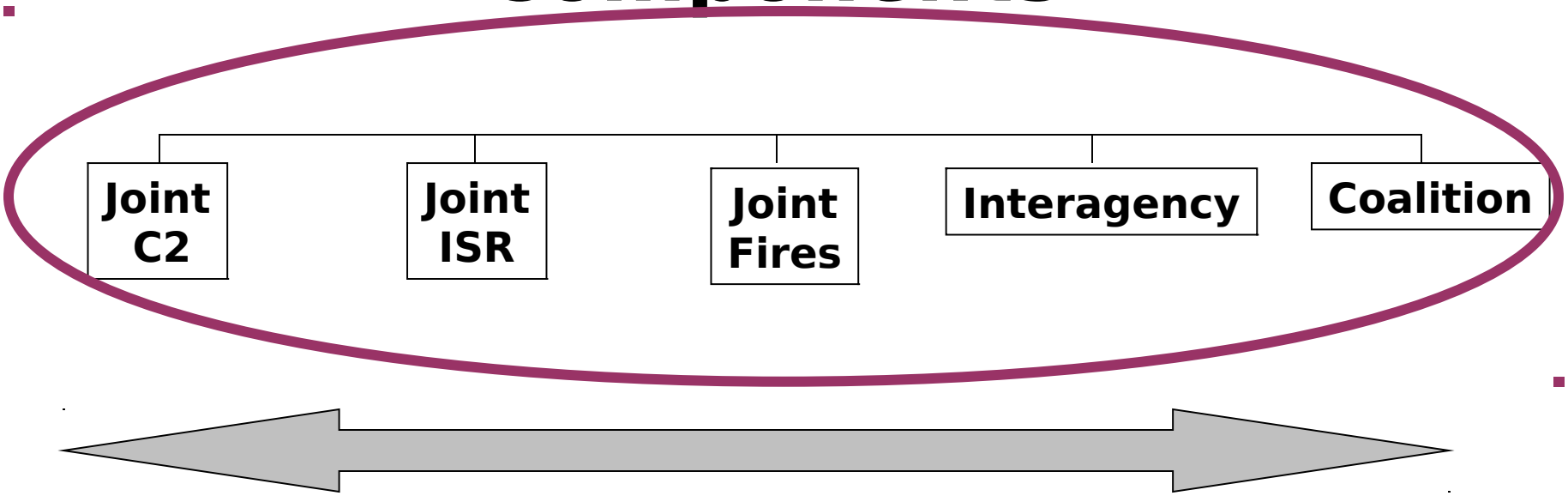
JBMC2 consists of the processes, architectures, systems, standards, and command and control operational concepts employed by the Joint Force Commander. The Joint Force Commander executes joint operations by employing joint and component BMC2 capabilities during the planning, coordinating, directing, controlling, and assessing of joint force operations from interface with the strategic level through the tactical level.

Unifying construct -- Allows us to approach C2 from an integrated "weapon system" perspective

Vision for JBMC2 Capabilities

- **JBMC2 aims at providing an integrated, interoperable, and networked joint force that will:**
  - **Ensure common shared situational awareness**
  - **Provide fused, precise and actionable intelligence**
  - **Support coherent distributed and dispersed operations, including forced entry into anti-access or area-denial environments**
  - **Ensure decision superiority enabling more agile, more lethal, and survivable joint operations**

JBMC2 Components



Joint Battle Management Command and Control spans the continuum of Joint C2, Joint Intelligence (ISR), Joint Fires, Interagency, and Coalition

Fundamental Battlespace Process = The Kill Chain

Command and Control Landscape

Common Capability Requirements Drive JBMC2 Focus

- **For any crisis, all Combatant Commanders must:**
  - **Execute command and control functions**
  - **Plan and execute using the same forces provided**
  - **Coordinate with the same national agencies**
  - **Rely on the same ISR forces/sources/agencies**
  - **Receive guidance from same national authorities**
  - **Perform crisis action planning**
  - **Perform assessment functions**
  - **Execute force deployment/redeployment**
  - **Employ the same national strategic capabilities**
  - **Execute Information Operations**
  - **Employ same SOF forces / “special” capabilities**
  - **Coordinate with / employ multinational forces**
  - **Rely on same supporting commands**
  - **Be ready to execute Joint C2 (Train)**

Implications of Net-Centric Warfare

- New level of Interdependence & Mutual Dependence
- Speed of Command – but only if we adapt
  - Organize, Train & Equip – vert & horiz
- Quality of decisions – the importance of:
  - Shared Awareness
  - Large scale vert & horiz collaboration
  - Linking sensors to decision makers
- Tactics, Techniques & Procedures - important as ever
- Both a Capability and an Operational

Challenges

- Exploiting new ways of doing business enabled by technical capabilities
  - We tend to adapt new technologies to old ways of doing business – inability to see
- The science of decision-making
  - Peaking decision-making via info superiority
- Linking activities in an Information Age Environment
  - The Virtual and the Live
- A coherent roadmap for transforming the force
  - Migration & integration of legacy & net-centric
  - Assured capability as we transform

JBMC2 Must Embrace Knowledge Management Concept!

Data Overload means *Information Jflaged*

World War I:
30 wpm
Field Phone

World War II:
60 wpm
Radio

Vietnam:
100 wpm
SATCOM

Gulf War:
192,000 wpm
Networked Computers

War in 2010:
1.5 trillion wpm
Wideband Datalinks

We can transmit the entire Library of Congress each minute

wpm - words per minute

JBMC2 : What We Have to Do

- Enable decision-making throughout the battlespace
  - (It's a thing human beings do…)
    (Decision aids do not make judgments)
- Advance Effects Based Operations (EBO)
  - Deter/defeat wide range of adversaries
- Master Knowledge Management
- Exploit new ways of doing business enabled by technical capabilities
  - GIG provides options for JBMC2 – must exploit
  - Strike balance of net-enabled & autonomous capabilities

"Objects In Mirror May Be Closer Than They Appear"

Near Term Operational Arena

Legacy C2 will not meet this challenge

- Effects-Based Operations (EBO)
- Information Operations (IO)
- Force Projection
- Joint Tactical Actions (JTA)

Effects Based

Knowledge Centric

- Operational Net Assessment (ONA)
- Joint Intelligence, Surveillance and Reconnaissance (JISR)
- Decision Superiority

Coherently Joint

Thinking Differently

- Collaborative Information Environment (CIE)

Fully Networked

- Standing Joint Force Headquarters (SJFHQ)
- Joint Interagency Coordination Group (JIACG)

Commanders are moving out – building CIEs, altering C2 CONOPs, writing SOPs – attempting to solve shortfalls and already employing some concepts

Transformation Leaders in JBMC2

- **Standing Joint Force Headquarters**
- **Collaborative Information Environments**
- **Deployable Joint Command and Control**
- **Netted Joint Forces**
- **Integrated Joint Fires**
- **Joint National Training Capability (JNTC)**
- **Advanced Concepts**
  - Effects Based Operations (EBO),

JBMC2 Value Added

More efficient and effective application of military power through a unified and interoperable command and control structure.

- More info…To more users…In less time…at all levels
- Better planning, situational awareness and decisions
- Better info sharing with coalition partners (MNIS) …
- Improved TST (joint fires)……more accurate BDA…..

SUMMARY

- **Humans and their processes are still the driving factors in warfighting capability**
- **Key to Interoperability of Forces is C2** ⟶
- **Net-Centric C2 Net-Centric Warfare**
- **Coherent Roadmap to the Future is Key to Transforming the Force**

Back Up

Command and Control Shortfalls (Legacy)

People and Processes

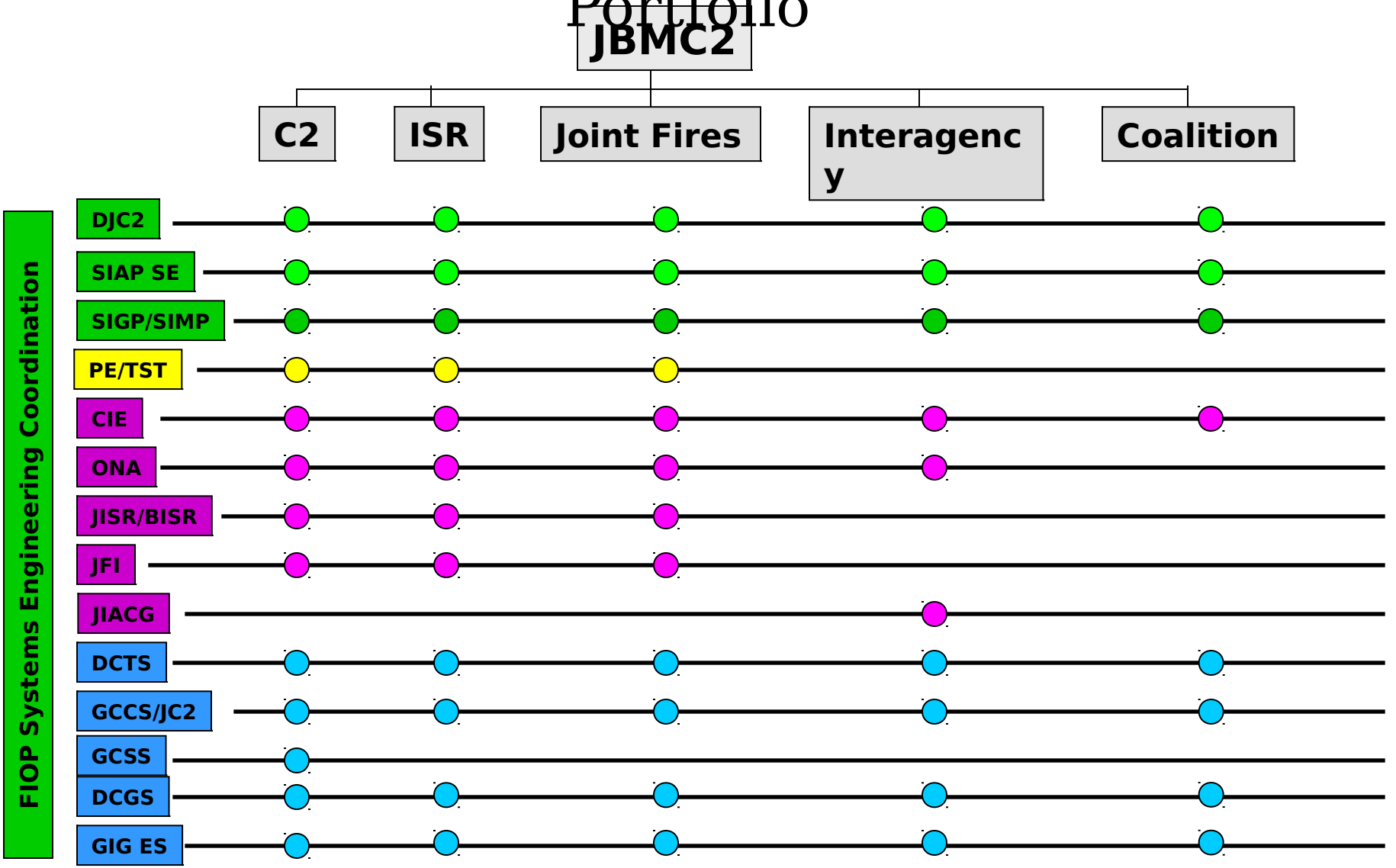
- Ad hoc Joint Task Force HQ establishment
- Lack of readiness - untrained HQ personnel
  - Individual
  - Collective – JFC/JTF/CTF/CC HQ staff level
- Takes too long to stand up
- Takes too long to organize
- Nonstandard or nonexistent procedures
- Too long to “gel” as a team
- Too long to learn to use equip, software tools, rules, how a headquarters works
- Too long to gain situational awareness
- Lack of expertise in joint force planning
- Too long to begin planning, produce COAs
- Lack of doctrinal expertise / skills employing warfighting concepts in operations

Communication Capabilities

- Non-standard tools
- Incoherent architectures
- Legacy technology mixed with new
- Modern C4I too complex to employ on “walk-in” basis
- Lack of decision tools for Info Age
- Varying standards
- Incompatibility
- Information stovepipes
- Lack of ‘business rules”
- Lack of database visibility
- Non-responsive environment
- Limited horiz & vert integration

(From Regional Combatant Command Survey)

JBMC2 Programs, Concepts & Initiatives Portfolio



Achieving Future Joint Force Integration

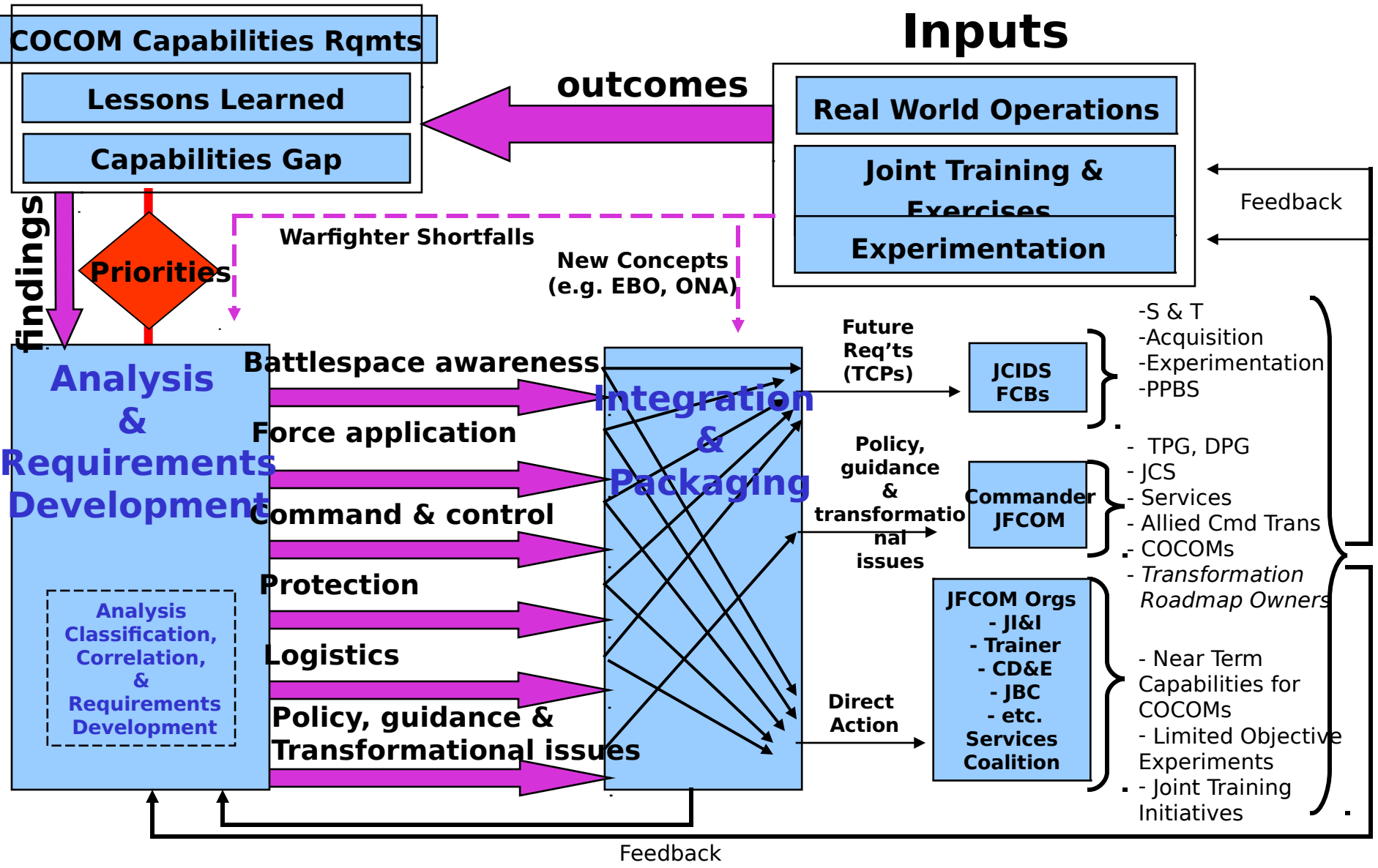
Continuously work with Combatant Commanders, Services, and Agencies to identify joint interoperability requirements and standards

Enforce interoperability through validation of DoD requirements documents for information exchange requirements and interoperability key performance parameters consistent with approved Joint Requirements Oversight Council joint operational concepts and integrated architectures

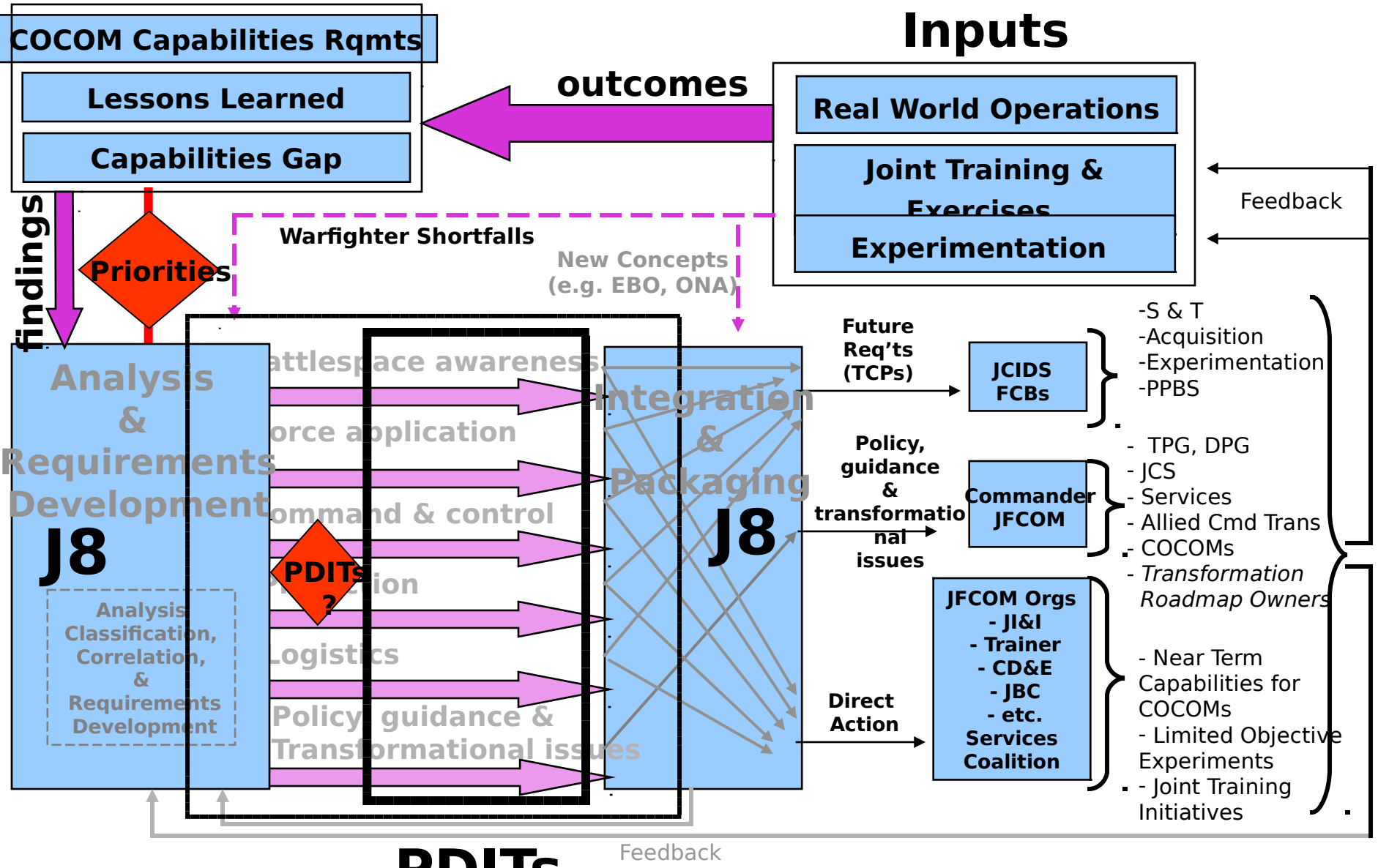
Addressing Legacy Joint Force Interoperability and Integration

- **UCP 2002 & DoD Directive 4630.5 &.8 established USJFCOM Joint Interoperability & Integration (JI&I)**
- **Identify and prioritize Combatant Commanders warfighting shortfalls from operational to tactical level**
- **Develop comprehensive Doctrinal, Organizational, Training, Materiel, Leadership, Personnel and Facilities (DOTMLPF) mission capability strategies**
- **Provide rapid fielding of mission capable solutions via transition funds - bridge Service, Agency Program Objective Memorandum cycles**

Joint Capabilities Development Process



Joint Capabilities Development Process



PDITs

JBMC2 Mandate

Secretary of Defense directed expanded responsibilities for USJFCOM to improve the Department of Defense ability to field Joint Battle Management Command and Control capabilities (MID 912)

"Strengthens the Department's fielding of Joint Battle Management Command and Control capabilities by improving the Department's ability to organize, train, and equip joint forces."

“Transformational” Vocabulary

Effects Based Operations (EBO) - A process for obtaining a desired strategic outcome or "effect" on the enemy, through the synergistic, multiplicative, and cumulative application of the full range of military and nonmilitary capabilities at the tactical, operational, and strategic levels.

“Transformational” Vocabulary

Standing Joint Force Headquarters (SJFHQ) - Intended to provide each warfighting joint theater Commander with a trained and equipped standing, Joint Command and Control (C2) capability specifically organized to reduce the lag time involved in setting up a JTF headquarters ready to rapidly and decisively conduct operations in small-scale contingencies.

Weapon(s) system - A combination of one or more weapons with all related equipment, materials, services, personnel, and means of delivery and deployment (if applicable) required for self-sufficiency.